

SEM518/520/522 Soil Compactor



※ Featured machines in photos may include optional equipment

SEM518
SEM520
SEM522

- **High Efficiency:** The unique vibratory pod design along with 50 mm thick drum provides superior compaction performance
- **Reliability:** Vibration system utilizes eccentric vibrate pod design, extends life over 50%
- **Operation:** Digital frequency meter and three level alarm system monitor machine performance

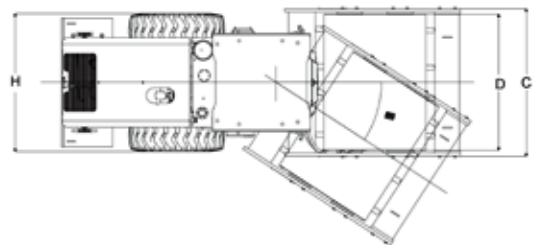
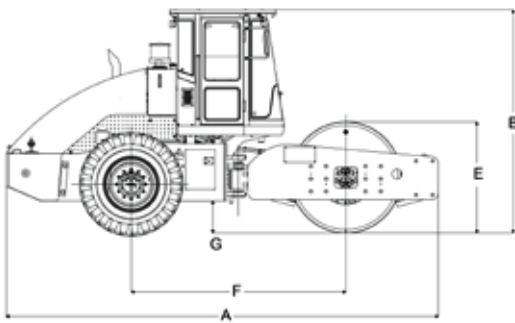
Website <http://www.semmachinery.com>

 **SEM**
A Caterpillar Brand

Specifications

Model	SEM518	SEM520	SEM522
Operating Weight	18000kg	20000kg	22000kg
Compaction			
Vibration Frequency (High/Low)	30/28Hz	30/28Hz	30/28Hz
Amplitude (High/Low)	2/1mm	2/1mm	2/1mm
Excitation Force (High/Low)	327/188KN	360/208KN	374/215KN
Static Pressure	415N/cm	461N/cm	507N/cm
Engine			
Rated Power	129kw	129kw	140kw
Speed	2000r/min	2000r/min	2000r/min
Fuel Tank Volume	262L	262L	262L
Hydraulic Oil Tank Volume	80L	80L	80L
Drum			
Drum Width	2130mm	2130mm	2130mm
Drum Diameter	1600mm	1600mm	1600mm
Drum Thickness	40mm	50mm	50mm
Tires			
Tires Type	20.5-25	20.5-25	20.5-25
Speed			
F/R I	2.98km/h	2.98km/h	2.98km/h
F/R II	5.88km/h	5.88km/h	5.88km/h
F/R III	9.60km/h	9.60km/h <td 9.60km/h	
Swing Angle	±12°	±12°	±12°
Steering Angle	±33°	±33°	±33°
Outer Turning Radius	6350mm	6350mm	6350mm
Max. Gradeability	34%	34%	34%

Dimensions



Size	A	B	C	D	E	F	G	H	β
SEM518	6,250	3,200	2,310	2,130	1,600	3,100	460	2,160	33°
SEM520	6,250	3,200	2,310	2,130	1,600	3,100	460	2,160	33°
SEM522	6,250	3,200	2,310	2,130	1,600	3,100	460	2,160	33°

The swing angle of the front and rear frame $\pm 12^\circ$

Caterpillar (Qingzhou) Ltd. Address: No.12999 Nanhuan Road,Caterpillar Industrial Park, Qingzhou City,Shandong Province, Zip Code: 262500 P.R.China

© Materials and specifications are subject to change without notice. Featured machines in photos may include optional equipment. See your SEM dealer for available options.

© 2016 Caterpillar (Qingzhou) Ltd. All Rights Reserved. SEM Machinery, SEM, their respective logos, trade dress as well as corporate and product identity used herein, are trademarks of Caterpillar (Qingzhou) Ltd. and may not be used without permission.

Version: September 2016

Key Features

Application/Versatility

- Applications include road, railway, airfield and industry yard compaction
- Optional diamond shape pad-foot roller for compacting clay soils
- Optional square shape pad-foot roller for compacting sandy materials

High efficiency

- 50mm drum, compaction performance is 10%~15% better than competitors
- Isolated modular cooling system, works in ambient temperature of 43 °C

Reliability

- Vibration system utilizes an eccentric vibe pod design, extends life up to 50%
- Closed center hydraulic system, world famous piston pump and motor
- Electronically controlled transmission, easy and comfortable to operate

Operation

- Digital frequency meter, monitors compaction frequency
- Three level alarm system and Engine speed gauge monitor machine performance

Tiltable Cab

SEM offers a tiltable cabin which provides more convenient maintenance of the pump, transmission, hose and electronic components

- Hydraulic tiltable cab is optional



Optional Accessories

Configuration (O=Optional)	SEM518	SEM520	SEM522
20.5-25 Diamond Tread Tires	O	O	O
20.5-25 Agriculture Tread Tires	O	O	O
Cold Start (intake air heating)	O	O	O
Compaction Meter	O	O	O
A/C (Cooling & Heating)	O	O	O
High Ambient Cooling System	O	O	O
Cab Hydraulic Tilting Device	O	O	O
Sunshade Curtain	O	O	O
Deluxe Suspension Swiveling Seat with Safety Belt	O	O	O
Heater Only with Defrost	O	O	O
Radio/Rotating Beacon/Rear Wiper & Washer	O	O	O
Diamond Shape Padfoot with Steel Scrapers	O	O	O
Square Shape Padfoot with Steel Scrapers	O	O	O

Powertrain

Electronically controlled transmission

- Easier to shift, reduces operator fatigue and improves working efficiency
- High reliability

Axle equipped with Proportional Torque differential (PTD)

- PTD controls torque applied to the wheels based on ground conditions, improves overall traction
- Grade ability is 34% compared to competitors' at 30%
- Optimized transmission ratio, 1st gear has higher travel speed



Dashboard

Vibratory Frequency Meter

- Continuously displays machine compaction frequency
- Operator may select appropriate frequency to avoid excessive compaction

Three Level Alarm System

- Machine will diagnose system issues and notify the operator with 3 levels of warning indicator lights and audio alarms



Display Contents

Transmission Oil Temperature	Battery Voltage
Vibratory Frequency Meter	
Working Hours	



Vibratory Hydraulic System

Closed center hydraulic system

- Improves efficiency by 20% over the open center system
- Reduces oil contamination, prolongs life of hydraulic system
- Maintains higher pressure and smaller energy loss
- Allows for simpler hose routing
- Requires smaller volume hydraulic tank, reduces maintenance cost

World class vibratory hydraulic components

- SEM518/520 utilize Sauer piston pump and motor
- SEM522 utilize Rexroth piston pump and motor

Vibratory hose

- Utilize Eton hoses and joints, high reliability
- Optimized hose routing, prolongs hose life

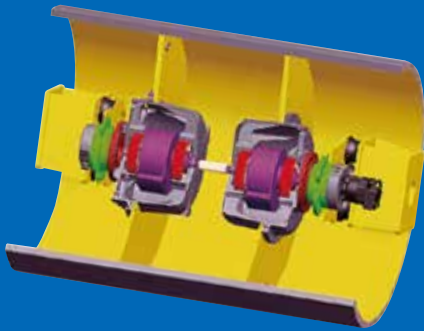


Cat® Product Link™

Cat® Product Link™ will support your business, and accurately convey information of the equipment to relevant personnel in a timely and effective manner for your better equipment management.

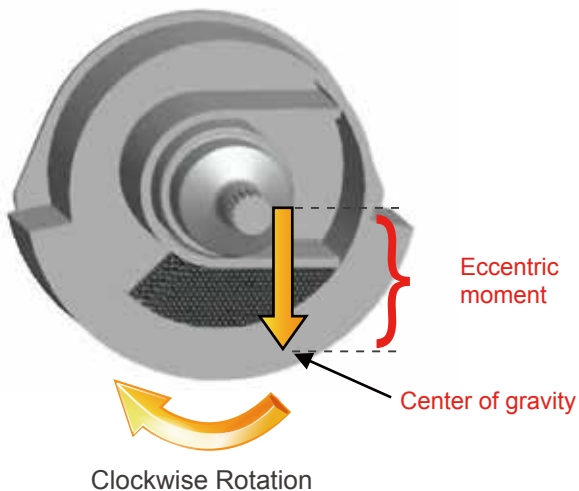


Vibe Pod Design



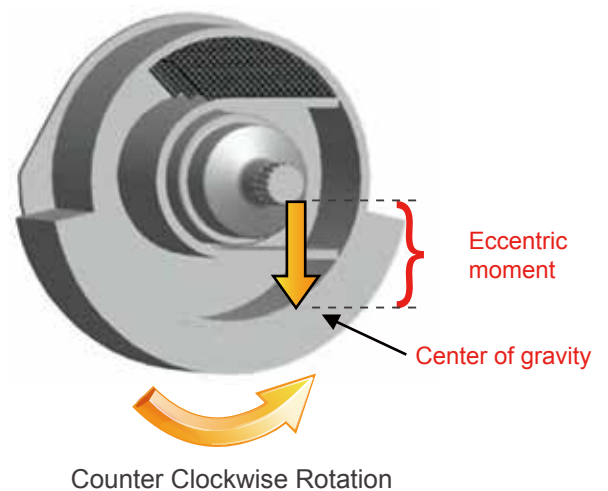
- Eccentric vibe pod design, extends system life by 50%
- Steel shot moving inside closed eccentric block, stable and reliable vibe amplitude, reduces impact to motor, prolongs maintenance period of vibratory system
- Completely sealed eccentric gear eliminates contamination, prolongs bearing life
- SEM520/522 are equipped with a 50 mm thick drum compared to competitors with a 40 mm thick drum, provides increased compaction performance versus the competition

High Amplitude



- The position of the steel shot and the eccentric weight combine to produce the maximum centrifugal force

Low Amplitude



- The position of the steel shot is offset by the eccentric weight to produce a lower centrifugal force

Cooling System

Isolated modular cooling system

- Suction style fan pulls low temperature air through the radiator, providing superior cooling capability
- Optional high ambient cooling system allows the machine to work in ambient temperature up to 50 °C

Shunt tank provides constant system pressure and provides easy visual check of coolant level

